

PAGE: 1

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/277,575

DATE: 04/09/1999  
TIME: 15:55:09

Input Set: I277575.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

1 <110> APPLICANT: Newell, Martha K.  
2 <120> TITLE OF INVENTION: METHODS AND PRODUCTS RELATED TO  
3 METABOLIC INTERACTIONS IN DISEASE  
4 <130> FILE REFERENCE: V0139/7028/HK  
5 <140> CURRENT APPLICATION NUMBER: US/09/277,575  
6 <141> CURRENT FILING DATE: 1999-03-26  
7 <150> EARLIER APPLICATION NUMBER: U.S. 60/082,250  
8 <151> EARLIER FILING DATE: 1998-04-17  
9 <150> EARLIER APPLICATION NUMBER: U.S. 60/094,519  
10 <151> EARLIER FILING DATE: 1998-07-29  
11 <150> EARLIER APPLICATION NUMBER: U.S. 60/101,580  
12 <151> EARLIER FILING DATE: 1998-09-24  
13 <160> NUMBER OF SEQ ID NOS: 13  
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15 <210> SEQ ID NO 1  
16 <211> LENGTH: 1491  
17 <212> TYPE: DNA  
18 <213> ORGANISM: Homo Sapiens  
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21 ggagtcttac cctgaaatca aaggatttaa agaaaaagtg gaatttttct tcagcaagct 120  
22 gtgaaactaa atccacaacc tttggagacc caggaacacc ctccaatctc tgtgtgtttt 180  
23 gtaaacatca ctggagggtc ttctacgtga gcaattggat tgtcatcagc cctgcctggt 240  
24 ttgcacctgg gaagtgcctt ggtcttactt gggctccaaat tgttggcttt cacttttgac 300  
25 cctaagcatc tgaagccatg ggccacacac ggaggcaggg aacatcacca tccaagtgtc 360  
26 catacctcaa tttctttcag ctcttggtgc tggctggtct ttctcacttc tgttcagggtg 420  
27 ttatccacgt gaccaaggaa gtgaaagaag tggcaacgct gtcctgtggt cacaatgttt 480  
28 ctggtgaaga gctggcacia actcgcctct actggcaaaa ggagaagaaa atggtgtctga 540  
29 ctatgatgtc tggggacatg aatatatggc ccgagtacaa gaaccggacc atctttgata 600  
30 tctaataaa cctctccatt gtgatcctgg ctctgcgcc atctgacgag ggcacatacg 660  
31 agtgtgttgt tctgaagtat gaaaaagacg ctttcaagcg ggaacacctg gctgaagtga 720  
32 cgttatcagt caaagctgac ttccctacac ctagtatatc tgactttgaa attccaactt 780  
33 ctaatattag aaggataatt tgctcaacct ctggagggtt tccagagcct cacctctcct 840  
34 gggttgaaaa tggagaagaa ttaaatgcca tcaacacaac agtttcccaa gatcctgaaa 900  
35 ctgagctcta tgcgttttagc agcaaaactgg atttcaatat gacaaccaac cacagcttca 960  
36 tgtgtctcat caagtatgga catttaagag tgaatcagac cttcaactgg aatacaacca 1020  
37 agcaagagca ttttcttgat aacctgctcc catcctgggc cattacctta atctcagtaa 1080  
38 atggaatttt tgtgatatgc tgctgacct actgctttgc cccaagatgc agagagagaa 1140  
39 ggaggaatga gagattgaga agggaaagtg tacgccctgt ataacagtgt ccgcagaagc 1200  
40 aaggggctga aaagatctga aggtagcctc cgtcatctct tctgggatac atggatcgtg 1260  
41 gggatcatga ggcattcttc ccttaacaaa tttaagctgt tttaccact acctcacctt 1320  
42 cttaaaaacc tctttcagat taagctgaac agttacaaga tggctggcat ccctctcctt 1380  
43 tctccccata tgcaatttgc ttaatgtaac ctcttctttt gccatgtttc cattctgcca 1440  
44 tcttgaattg tcttgtcagc caattcatta tctattaaac actaatttga g 1491

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PAGE: 2

# RAW SEQUENCE LISTING PATENT APPLICATION US/09/277,575

DATE: 04/09/1999  
TIME: 15:55:09

Input Set: I277575.RAW

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47 <212> TYPE: PRT
48 <213> ORGANISM: Homo Sapiens
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53 20 25 30
54 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
55 35 40 45
56 Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
57 50 55 60
58 Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
59 65 70 75 80
60 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
61 85 90 95
62 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
63 100 105 110
64 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
65 115 120 125
66 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr
67 130 135 140
68 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile
69 145 150 155 160
70 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
71 165 170 175
72 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp
73 180 185 190
74 Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met
75 195 200 205
76 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg
77 210 215 220
78 Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro
79 225 230 235 240
80 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
81 245 250 255
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83 260 265 270
84 Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val
85 275 280 285
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89 <213> ORGANISM: Homo Sapiens
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92 tgcttctgtg ttccttggga atgctgctgt gcttatgcat ctggtctctt tttggagcta 120
93 cagtggacag gcatttgtga cagcactatg ggactgagta acattctctt tgtgatggcc 180
94 ttcctgctct ctggtgctgc tcctctgaag attcaagctt atttcaatga gactgcagac 240

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PAGE: 3

# RAW SEQUENCE LISTING PATENT APPLICATION US/09/277,575

DATE: 04/09/1999  
TIME: 15:55:09

Input Set: I277575.RAW

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97      gttcattcca agtatatggg ccgcacaagt tttgattcgg acagttggac cctgagactt      420
98      cacaatcttc agatcaagga caagggcttg tatcaatgta tcatccatca caaaaagccc      480
99      acaggaatga ttgcgatcca ccagatgaat tctgaactgt cagtgccttg taacttcagt      540
100     caacctgaaa tagtaccaat ttctaataa acagaaaatg tgtacataaa tttgacctgc      600
101     tcatctatac acggttaccc agaacctaa aagatgagtg ttttgctaag aaccaagaat      660
102     tcaactatcg agtatgatgg tattatgcag aaatctcaag ataatgtcac agaactgtac      720
103     gacgtttcca tcagcttggtc tgtttcattc cctgatgtta cgagcaatat gaccatcttc      780
104     tgtattctgg aaactgacaa gacgcgggctt ttatcttcac ctttctctat agagcttgag      840
105     gaccctcagc ctcccccaga ccacattcct tggattacag ctgtacttcc aacagttatt      900
106     atatgtgtga tggttttctg tctaattcta tggaaatgga agaagaagaa gcggcctcgc      960
107     aactcttata aatgtggaac caacacaaatg gagaggggaag agagtgaaca gaccaagaaa     1020
108     agagaaaaaa tccatatacc tgaaagatct gatgaagccc agcgtgtttt taaaagtctc     1080
109     aagacatctt catgcgacaa aagtgatata tgtttttaat taaagagtaa agcccataca     1140
110     agtattcatt tttctaccc tttcctttgt aagttcctgg gcaacctttt tgatttcttc     1200
111     cagaaggcaa aaagacatta ccatgagtaa taagggggct ccaggactcc ctctaagtgg     1260
112     aatagcctcc ctgtaactcc agctctgctc cgtatgccaa gaggagactt taattctctt     1320
113     actgcttctt ttcacttcag agcacactta tgggcccaagc ccagcttaat ggctcatgac     1380
114     ctggaataaa aatttaggac caataaaaaa aaaaaaaaaa aaaa                        1424

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115 &lt;210&gt; SEQ ID NO 4

116 &lt;211&gt; LENGTH: 323

117 &lt;212&gt; TYPE: PRT

118 &lt;213&gt; ORGANISM: Homo Sapiens

119 &lt;400&gt; SEQUENCE: 4

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123      20              25              30
124      Pro Cys Gln Phe Ala Asn Ser Gln Asn Gln Ser Leu Ser Glu Leu Val
125      35              40              45
126      Val Phe Trp Gln Asp Gln Glu Asn Leu Val Leu Asn Glu Val Tyr Leu
127      50              55              60
128      Gly Lys Glu Lys Phe Asp Ser Val His Ser Lys Tyr Met Gly Arg Thr
129      65              70              75              80
130      Ser Phe Asp Ser Asp Ser Trp Thr Leu Arg Leu His Asn Leu Gln Ile
131      85              90              95
132      Lys Asp Lys Gly Leu Tyr Gln Cys Ile Ile His His Lys Lys Pro Thr
133      100             105             110
134      Gly Met Ile Arg Ile His Gln Met Asn Ser Glu Leu Ser Val Leu Ala
135      115             120             125
136      Asn Phe Ser Gln Pro Glu Ile Val Pro Ile Ser Asn Ile Thr Glu Asn
137      130             135             140
138      Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile His Gly Tyr Pro Glu Pro
139      145             150             155             160
140      Lys Lys Met Ser Val Leu Leu Arg Thr Lys Asn Ser Thr Ile Glu Tyr
141      165             170             175
142      Asp Gly Ile Met Gln Lys Ser Gln Asp Asn Val Thr Glu Leu Tyr Asp
143      180             185             190
144      Val Ser Ile Ser Leu Ser Val Ser Phe Pro Asp Val Thr Ser Asn Met

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PAGE: 4

# RAW SEQUENCE LISTING PATENT APPLICATION US/09/277,575

DATE: 04/09/1999  
TIME: 15:55:09

Input Set: I277575.RAW

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145          195          200          205
146      Thr Ile Phe Cys Ile Leu Glu Thr Asp Lys Thr Arg Leu Leu Ser Ser
147          210          215          220
148      Pro Phe Ser Ile Glu Leu Glu Asp Pro Gln Pro Pro Pro Asp His Ile
149          225          230          235          240
150      Pro Trp Ile Thr Ala Val Leu Pro Thr Val Ile Ile Cys Val Met Val
151          245          250          255
152      Phe Cys Leu Ile Leu Trp Lys Trp Lys Lys Lys Lys Arg Pro Arg Asn
153          260          265          270
154      Ser Tyr Lys Cys Gly Thr Asn Thr Met Glu Arg Glu Glu Ser Glu Gln
155          275          280          285
156      Thr Lys Lys Arg Glu Lys Ile His Ile Pro Glu Arg Ser Asp Glu Ala
157          290          295          300
158      Gln Arg Val Phe Lys Ser Ser Lys Thr Ser Ser Cys Asp Lys Ser Asp
159          305          310          315          320
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164      <213> ORGANISM: Homo Sapiens
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167      ggaatagcgg cgtgcttggc ggacgtgatc accttcccgc tggacacggc caaagtccgg      120
168      ctccaggtcc aaggtgaatg cccgacgtcc agtggtatta ggtataaagg tgtcctggga      180
169      acaatcaccg ctgtggtaaa aacagaaggg cggatgaaac tctacagcgg gctgcctgcg      240
170      gggcttcagc ggcaaatacag ctccgcctct ctcaggatcg gcctctacga cacgggtccag      300
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174      tacagaataa tagcaacaac cgaaggcttg acgggtcttt ggaaagggac tactcccaat      540
175      ctgatgagaa gtgtcatcat caattgtaca gagctagtaa catatgatct aatgaaggag      600
176      gcctttgtga aaaacaacat attagcagat gacgtcccct gccacttggt gtcggctctt      660
177      atcgctggat tttgcgcaac agctatgtcc tccccggtgg atgtagtaaa aaccagattt      720
178      attaattctc caccaggaca gtacaaaagt gtgcccaact gtgcaatgaa agtggttcaact      780
179      aacgaaggac caacggcttt cttcaagggg ttggtacctt ctttcttgcg acttggatcc      840
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183      <211> LENGTH: 307
184      <212> TYPE: PRT
185      <213> ORGANISM: Homo Sapiens
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190          20          25          30
191      Pro Leu Asp Thr Ala Lys Val Arg Leu Gln Val Gln Gly Glu Cys Pro
192          35          40          45
193      Thr Ser Ser Val Ile Arg Tyr Lys Gly Val Leu Gly Thr Ile Thr Ala
194          50          55          60

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PAGE: 5

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/277,575

DATE: 04/09/1999  
TIME: 15:55:09

Input Set: I277575.RAW

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196 65 70 75 80
197 Gly Leu Gln Arg Gln Ile Ser Ser Ala Ser Leu Arg Ile Gly Leu Tyr
198 85 90 95
199 Asp Thr Val Gln Glu Phe Leu Thr Ala Gly Lys Glu Thr Ala Pro Ser
200 100 105 110
201 Leu Gly Ser Lys Ile Leu Ala Gly Leu Thr Thr Gly Gly Val Ala Val
202 115 120 125
203 Phe Ile Gly Gln Pro Thr Glu Val Val Lys Val Arg Leu Gln Ala Gln
204 130 135 140
205 Ser His Leu His Gly Ile Lys Pro Arg Tyr Thr Gly Thr Tyr Asn Ala
206 145 150 155 160
207 Tyr Arg Ile Ile Ala Thr Thr Glu Gly Leu Thr Gly Leu Trp Lys Gly
208 165 170 175
209 Thr Thr Pro Asn Leu Met Arg Ser Val Ile Ile Asn Cys Thr Glu Leu
210 180 185 190
211 Val Thr Tyr Asp Leu Met Lys Glu Ala Phe Val Lys Asn Asn Ile Leu
212 195 200 205
213 Ala Asp Asp Val Pro Cys His Leu Val Ser Ala Leu Ile Ala Gly Phe
214 210 215 220
215 Cys Ala Thr Ala Met Ser Ser Pro Val Asp Val Val Lys Thr Arg Phe
216 225 230 235 240
217 Ile Asn Ser Pro Pro Gly Gln Tyr Lys Ser Val Pro Asn Cys Ala Met
218 245 250 255
219 Lys Val Phe Thr Asn Glu Gly Pro Thr Ala Phe Phe Lys Gly Leu Val
220 260 265 270
221 Pro Ser Phe Leu Arg Leu Gly Ser Trp Asn Val Ile Met Phe Val Cys
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224 290 295 300
225 Cys Ala Thr
226 305
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229 <212> TYPE: DNA
230 <213> ORGANISM: Homo Sapiens
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234 tactgccact gtgaagtttc ttggggctgg cacagctgcc tgcacgcag atctcatcac 180
235 ctttctctctg gatactgcta aagtccggtt acagatccaa ggagaaagtc aggggccagt 240
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237 tactgagggc cccgaagcc tctacaatgg gctggttgcc ggcctgcagc gccaaatgag 360
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239 tgagcatgcc agcattggga gccgcctcct agcaggcagc accacaggtg ccctggctgt 480
240 ggctgtggcc cagcccacgg atgtggtaaa ggtccgattc caagctcagg cccgggctgg 540
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242 gttccggggc ctctggaaag ggacctctcc caatgttgct cgtaatgcca ttgtcaactg 660
243 tgctgagctg gtgacctatg acctcatcaa ggatgcctc ctgaaagcca acctcatgac 720
244 agatgacctc ccttgccact tcacttctgc ctttggggca ggcttctgca ccactgtcat 780

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PAGE: 6

VERIFICATION SUMMARY  
PATENT APPLICATION US/09/277,575

DATE: 04/09/1999  
TIME: 15:55:09

Input Set: I277575.RAW

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